

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented): An electrophotographic toner comprising at least a binder resin, a colorant, and a resin negative charge control agent, wherein said binder resin is a polyester, a polyol, or a polyester and a polyol and said resin negative charge control agent comprises polymerized units of (1) sulfonic acid-containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof.

Claim 2 (Previously Presented): The electrophotographic toner according to claim 1, wherein the weight % of said sulfonic acid-containing monomers based on the weight of the resin negative charge control agent is between 1 to 30 % by weight; the weight % of the aromatic monomers having electron-withdrawing groups based on the weight of said resin negative charge control agent is between 1 to 80 % by weight; and the weight % of said acrylate and/or methacrylate monomers based on the weight of said resin negative charge control agent is between 10 to 80 % by weight.

Claim 3 (Previously Presented): The electrophotographic toner according to claim 1, wherein said aromatic monomers having electron-withdrawing groups are at least one selected from the group consisting of phenyl maleimides and phenyl itaconimides substituted with chlorine atoms or nitro groups.

Claim 4 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent further comprises polymerized units of one or more aromatic vinyl monomers.

Claim 5 (Previously Presented): The electrophotographic toner according to claim 4, wherein the weight percentage of said aromatic vinyl monomers contained in the resin negative charge control agent is 30% based on the total weight of the resin negative charge control agent.

Claim 6 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent has a dispersion particle size of between 0.05 and 1.50 μm length-wise, and between 0.02 and 1.00 μm breadth-wise.

Claim 7 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent has an apparent viscosity of 104 P (where 104 P = 104 $\text{g}/\text{cm}\cdot\text{s}$) between 85 and 110°C.

Claim 8 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent has a volatile matter content of 5% or less by weight based on the total weight of said resin negative charge control agent.

Claim 9 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent has a volume resistivity of between 9.5 and 11.5 $\log \Omega\cdot\text{cm}$.

Claim 10 (Previously Presented): The electrophotographic toner according to claim 1, wherein said resin negative charge control agent has a weight average molecular weight of between 5000 and 100000.

Claim 11 (Previously Presented): The electrophotographic toner according to claim 1, wherein the weight % of said resin negative charge control agent based on the weight of the base toner particles is between 0.1 and 20 % by weight.

Claim 12 (Previously Presented): The electrophotographic toner according to claim 1, wherein said binder resin has an acid value of 20 mg KOH/g or less.

Claim 13 (Previously Presented): A one-component developer which comprises an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, a colorant, and a resin negative charge control agent,

wherein said binder resin is a polyester, a polyol, or a polyester and a polyol, and said negative charge control agent comprises polymerized units of (1) sulfonic acid-containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof.

Claim 14 (Previously Presented) A two-component developer which comprises a carrier and an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, a colorant, and a resin negative charge control agent, wherein said binder resin is a polyester, a polyol, or a polyester and a polyol, and

said negative charge control agent comprises polymerized units of (1) sulfonic acid-containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof.

Claim 15 (Original): The two-component developer according to claim 14, wherein said carrier is coated with a resin.

Claim 16 (Previously Presented): A container encasing a one-component developer, said developer comprising an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, a colorant, and a resin negative charge control agent, wherein said binder resin is a polyester, a polyol, or a polyester and a polyol, and said negative charge control agent comprises polymerized units of (1) sulfonic acid-containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof .

Claim 17 (Previously Presented): A container encasing a two-component developer said developer comprising a carrier and an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, a colorant, and a resin negative charge control agent,

wherein said binder resin is a polyester, a polyol, or a polyester and a polyol, and

said negative charge control agent comprises polymerized units of (1) sulfonic acid-containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof.

Claim 18 (Canceled).

Claim 19 (Canceled).

Claim 20 (Currently Amended): A method of forming image using a one-component developer which contains an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, colorant, and a negative charge control agent,

wherein said binder resin is a polyester a polyol, or a polyester and a polyol, and said negative charge control agent comprises polymerized units of components which are (1) ~~sulfonate group containing~~ sulfonic-acid containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof,

the method comprising:

forming a latent image on a latent image substrate;

developing the latent image, formed on the latent image substrate, using the one-component developer on a developer substrate;

transferring the developed toner image onto a transfer substrate; and

heating the toner image on the transfer substrate thereby fixing the image onto the transfer substrate.

Claim 21 (Previously Presented): The method of forming image according to claim 20, further comprising

forming a thin layer of the one-component developer on the developer substrate before developing the latent image,

wherein when developing the latent image the thin layer of the one-component developer is contacted or non-contacted with the latent image substrate, in said developing.

Claim 22 (Original): The method of forming image according to claim 20, wherein latent images having colors different from each other are formed on the latent image substrates respectively by each color when forming the latent image on the latent image substrate;

using plurality of multi-color development apparatuses each provided with said developer substrate, and a development blade that regulates evenly layer-thickness of the one-component developer supplied onto said developer substrate, each colored latent image is developed onto said latent image substrate with the correspondingly colored developer held on said developer substrate, when developing the latent image; and

said transfer substrate is abutted onto said latent image substrate surface using a transfer unit, and developed toner images differently colored from each other are electrostatically transferred onto said transfer substrate sequentially by each color, when transferring the developed toner image.

Claim 23 (Currently Amended): A method of forming image using a two-component developer which contains a carrier and an electrophotographic toner, said electrophotographic toner comprising at least a binder resin, colorant, and a negative charge control agent, wherein said binder resin is a polyester, a polyol, or a polyester and a polyol, and said negative charge control agent comprises polymerized units of components which are (1) sulfonate group-containing sulfonic-acid containing monomers, (2) aromatic monomers having electron-withdrawing groups, and (3) at least one selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, propyl(meth)acrylate, n-butyl(meth)acrylate, isobutyl(meth)acrylate, stearyl(meth)acrylate, dodecyl(meth)acrylate, 2-ethylhexylacrylate and combinations thereof,

the method comprising:

forming a latent image on a latent image substrate;

developing the latent image, formed on the latent image substrate, using the two-component developer on a developer substrate;

transferring the developed toner image onto a transfer substrate; and

heating the toner image on the transfer substrate thereby fixing the image onto the transfer substrate.

Claim 24 (Previously Presented): The method of forming image according to claim 23, further comprising

forming a thin layer of the two-component developer on the developer substrate before developing the latent image,

wherein when developing the latent image the thin layer of the two-component developer is contacted or non-contacted with the latent image substrate, in said developing.

Claim 25 (Original): The method of forming image according to claim 23, wherein latent images having colors different from each other are formed on the latent image substrates respectively by each color when forming the latent image on the latent image substrate;

using plurality of multi-color development apparatuses each provided with said developer substrate, and a development blade that regulates evenly layer-thickness of the two-component developer supplied onto said developer substrate, each colored latent image is developed onto said latent image substrate with the correspondingly colored developer held on said developer substrate, when developing the latent image; and
said transfer substrate is abutted onto said latent image substrate surface using a transfer unit, and developed toner images differently colored from each other are electrostatically transferred onto said transfer substrate sequentially by each color, when transferring the developed toner image.

Claim 26 (Previously Presented): The toner of Claim 1, comprising a polyester binder resin.

Claim 27 (Previously Presented): The toner of Claim 1, comprising a polyol binder resin.

Claim 28 (Canceled).

Claim 29 (Previously Presented): The toner of Claim 1, comprising a monomer (3) selected from the group consisting of 2-ethylhexylacrylate, n-butyl(meth)acrylate and mixtures thereof.